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10/522,187

09/21/2005

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EXAMINER

MERLIN, JESSICA M

ART UNIT

PAPER NUMBER

2871

MAIL DATE

DELIVERY MODE

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/522,187

Applicant(s)

KAMEYAMA ET AL.

Examiner

Jessica M. Merlin

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 24 January 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 January 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 01/24/05, 04/19/05.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. **Claims 1, 6, 7, 9, 10, 14, 17, 20, 21 and 23 are rejected under 35 U.S.C. 102(b) as being anticipated by Iba et al. (JP 10-268294A).**

In regard to claim 1, Iba et al. discloses a polarizer containing a dichroic material in a matrix (see e.g. paragraph [0029]), wherein an in-plane retardation at a measurement wavelength providing no absorption is in a range of 950 to 1350 nm (see e.g. Table 2 where calculation of the retardation,  $\Delta n \cdot d$  yields values in the above range i.e. for a thickness of 60  $\mu\text{m}$  and  $\Delta n = 0.02$ , retardation = 1.2  $\mu\text{m}$  = 1200 nm).

In regard to claim 6, Iba et al. discloses the matrix is a polymer film (see e.g. paragraph [0014] of the English translation).

In regard to claim 7, Iba et al. discloses the polymer film is a polyvinyl alcohol film (see e.g. paragraph [0014] of the English translation).

In regard to claim 9, Iba et al. discloses an optical film comprising the polarizer according to claim 1 (see e.g. paragraph [0012] and Figure 1 of the English translation).

In regard to claim 10, Iba et al. discloses the optical film according to claim 9, which further comprises a transparent protective layer **3a, 3b**, and the transparent

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protective layer **3a,3b** is arranged on at least one surface of the polarizer **1** (see e.g. paragraph [0012] and Figure 1 of the English translation).

**In regard to claim 14**, Iba et al. discloses a liquid crystal panel comprising at least either the polarizer according to claim 1, wherein the polarizer **1** is arranged on at least one surface of a liquid crystal cell (see e.g. Figure 2 and paragraph [0020] of the English translation).

**In regard to claim 15**, Iba et al. discloses a liquid crystal display comprising the liquid crystal panel according to claim 14 (see e.g. Figure 2 and paragraph [0020] of the English translation).

**In regard to claim 17**, Iba et al. discloses an image display device comprising at least the polarizer **1** according to claim 1 (see e.g. Figure 2 and paragraph [0020] of the English translation).

**In regard to claim 20**, Iba et al. discloses a liquid crystal panel comprising at least the optical film according to claim 9, wherein the optical film is arranged on at least one surface of a liquid crystal cell (see e.g. Figure 2 and paragraph [0020] of the English translation).

**In regard to claim 21**, Iba et al. discloses a liquid crystal display comprising the liquid crystal panel according to claim 20 (see e.g. Figure 2 and paragraph [0020] of the English translation).

**In regard to claim 23**, Iba et al. discloses an image display device comprising at least the optical film according to claim 9 (see e.g. Figure 2 and paragraph [0020] of the English translation).

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. **Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iba et al. (JP 10-268294A) in view of Harita et al. (U.S. 2001/0039319 A1).**

In regard to claim 2, Iba et al.'s invention discloses all of the claimed limitations from above, but fails to disclose a differential retardation fluctuation ( $\sigma$ ) at the measurement wavelength providing no absorption is in a range of -5 nm/mm to 5 nm/mm.

However, Harita et al. teaches a differential retardation fluctuation ( $\sigma$ ) at the measurement wavelength providing no absorption is in a range of -5 nm/mm to 5 nm/mm (see e.g. abstract and paragraph [0024]).

5. Given the teachings of Harita et al., it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the polarizer of Iba et al. with a differential retardation fluctuation ( $\sigma$ ) at the measurement wavelength providing no absorption is in a range of -5 nm/mm to 5 nm/mm.

Doing so would provide a reduction in color irregularities due to fluctuations in film quality that results in an improved display quality.

In regard to claim 3, Iba et al.'s invention discloses all of the claimed limitations from above, but fails to disclose the measurement wavelength providing no absorption,

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a distance between a measurement position providing a maximum value of the in-plane retardation and a measurement position providing a minimum value of the in-plane retardation is in a range not more than 10 mm or not less than 100 mm, and a difference between the maximum value and the minimum value (in-plane retardation variation) is less than 60  $\mu\text{m}$ .

However, Harita et al. teaches the measurement wavelength providing no absorption, a distance between a measurement position providing a maximum value of the in-plane retardation and a measurement position providing a minimum value of the in-plane retardation is in a range not more than 10 mm or not less than 100 mm, and a difference between the maximum value and the minimum value (in-plane retardation variation) is less than 60  $\mu\text{m}$  (see e.g. paragraph [0024]).

6. Given the teachings of Harita et al., it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the polarizer of Iba et al. with a measurement position providing a maximum value of the in-plane retardation and a measurement position providing a minimum value of the in-plane retardation is in a range not more than 10 mm or not less than 100 mm, and a difference between the maximum value and the minimum value (in-plane retardation variation) is less than 60  $\mu\text{m}$ .

Doing so would provide a means for measuring the quality of the optical film, so as to assure there is reduction in color irregularities due to fluctuations in film quality that results in an improved display quality.

**7. Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iba et al. (JP 10-268294A) in view of Sugino et al. (JP 2002333522).**

In regard to claim 4, Iba et al.'s invention discloses all of the claimed limitations from above, but fails to disclose the measurement wavelength is in a range of 800 to 1500 nm.

However, Sugino et al. teaches disclose the measurement wavelength is in a range of 800 to 1500 nm (see e.g. abstract, where a wavelength of 900nm is used).

8. Given the teachings of Sugino et al., it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the polarizer of Iba et al. with the measurement wavelength is in a range of 800 to 1500 nm.

Doing so would provide a measure of the quality of the retardation of the polarizing film at a wavelength that is in the IR.

In regard to claim 5, Iba et al.'s invention discloses all of the claimed limitations from above, but fails to disclose the measurement wavelength is 1000 nm.

However, Sugino et al. teaches the measurement wavelength is 900 nm (see e.g. abstract, where a wavelength of 900 nm is used, which is close to the claimed value of 1000nm).

9. Given the teachings of Sugino et al., it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the polarizer of Iba et al. with the measurement wavelength is 1000 nm.

Doing so would provide a measure of the quality of the retardation of the polarizing film at a wavelength that is in the IR.

**10. Claims 8, 16, 19, 22 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iba et al. (JP 10-268294A) in view of Honda et al. (U.S. 2001/0033349 A1)**

In regard to claim 8, Iba et al.'s invention discloses all of the claimed limitations from above, but fails to disclose the polarizer according to claim 1, which is chip-cut.

However, Honda et al. teaches the polarizer according to claim 1, which is chip-cut (see e.g. [0053]).

11. Given the teachings of Honda et al., it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the polarizer of Iba et al. with the polarizer is chip-cut.

Doing so would provide a polarizer, which is cut to size for use in a display material from the stretched bulk material using a well-known technique.

In regard to claim 16, Iba et al.'s invention discloses all of the claimed limitations from above, but fails to disclose the liquid crystal display according to claim 15, which has a flat light source for emitting polarized light.

However, Honda et al. teaches a flat light source for emitting polarized light (see e.g. paragraph [0038]).

12. Given the teachings of Honda et al., it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the polarizer of Iba et al. with a flat light source for emitting polarized light.

Doing so would provide a means of lighting the liquid crystal display apparatus using, which enhances the luminance of the display device.



**In regard to claim 19**, Iba et al.'s invention discloses all of the claimed limitations from above, but fails to disclose an in-house production method for producing the image display device according to claim 17, which comprises a process of chip-cutting at least a polarizer according containing a dichroic material in a matrix and immediately bonding to the display device.

However, Honda et al. teaches chip-cutting at least a polarizer according containing a dichroic material in a matrix (see e.g. paragraph [0053] of the English translation) and immediately bonding to the display device (see e.g. paragraph [0037] of the English translation).

13. Given the teachings of Honda et al., it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the polarizer of Iba et al. with an in-house production method for producing an image display device comprising comprises a process of chip-cutting at least a polarizer according containing a dichroic material in a matrix and immediately bonding to the display device.

Doing so would provide a means of manufacturing a liquid crystal display device having an increased luminance and polarizer film quality.

**In regard to claim 22**, Iba et al.'s invention discloses all of the claimed limitations from above, but fails to disclose the liquid crystal display according to claim 21, which has a flat light source for emitting polarized light.

However, Honda et al. teaches a flat light source for emitting polarized light (see e.g. paragraph [0038]).

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14. Given the teachings of Honda et al., it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the polarizer of Iba et al. with a flat light source for emitting polarized light.

Doing so would provide a means of lighting the liquid crystal display apparatus using, which enhances the luminance of the display device.

**In regard to claim 25**, Iba et al.'s invention discloses all of the claimed limitations from above, but fails to disclose an in-house production method for producing the image display device according to claim 17, which comprises a process of chip-cutting at least an optical film comprising a polarizer, the polarizer containing a dichroic material in a matrix and immediately bonding to the display device.

However, Honda et al. teaches chip-cutting at least a polarizer according containing a dichroic material in a matrix (see e.g. paragraph [0053] of the English translation) and immediately bonding to the display device (see e.g. paragraph [0037] of the English translation).

15. Given the teachings of Honda et al., it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the polarizer of Iba et al. with an in-house production method for producing an image display device comprising comprises a process of chip-cutting at least a polarizer according containing a dichroic material in a matrix and immediately bonding to the display device.

Doing so would provide a means of manufacturing a liquid crystal display device having an increased luminance and polarizer film quality.

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**16. Claims 11-13, 18 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iba et al. (JP 10-268294A) in view of Yoshimi et al. (JP 2001311826).**

In regard to claim 11, Iba et al.'s invention discloses all of the claimed limitations from above, but fails to disclose a pressure-sensitive adhesive layer is arranged on at least one outermost surface layer.

However, Yoshimi et al. teaches a pressure-sensitive adhesive layer is arranged on at least one outermost surface layer (see e.g. abstract and paragraph [0037] of the English translation).

17. Given the teachings of Yoshimi et al., it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the polarizer of Iba et al. with a pressure-sensitive adhesive layer is arranged on at least one outermost surface layer.

Doing so would provide a commonly used means for attaching the polarizer to other layers of a display device.

In regard to claim 12, Iba et al.'s invention discloses all of the claimed limitations from above, but fails to disclose the optical film according to claim 9, which further comprises at least either a polarization converter or a retardation film.

However, Yoshimi et al. teaches the optical film according to claim 9, which further comprises at least either a polarization converter or a retardation film 9 (see e.g. abstract and paragraph [0007] of the English translation).

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18. Given the teachings of Yoshimi et al., it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the polarizer of Iba et al. with the optical film further comprises at least either a polarization converter or a retardation film.

Doing so would provide an optical film that can compensate a liquid crystal display device, which improves the quality and viewing angle of the display.

**In regard to claim 13**, Iba et al.'s invention discloses all of the claimed limitations from above, but fails to disclose the polarization converter is either an anisotropic reflective polarizer or an anisotropic light-scattering polarizer.

However, Yoshimi et al. teaches the polarization converter is either an anisotropic reflective polarizer or an anisotropic light-scattering polarizer (see e.g. abstract and paragraph [0007] of the English translation).

19. Given the teachings of Yoshimi et al., it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the polarizer of Iba et al. with the polarization converter is either an anisotropic reflective polarizer or an anisotropic light-scattering polarizer.

Doing so would provide an optical film that can compensate a liquid crystal display device, which improves the quality and viewing angle of the display

**In regard to claim 18**, Iba et al.'s invention discloses all of the claimed limitations from above, but fails to disclose the image display device according to claim 17, which is an electroluminescent display.

However, Yoshimi et al. teaches the image display device according to claim 17, which is an electroluminescent display (see e.g. paragraph [0013] of the English translation).

20. Given the teachings of Yoshimi et al., it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the polarizer of Iba et al. with an image display device using the polarizer is an electroluminescent display.

Doing so would provide a display that has increased luminance and viewing quality.

**In regard to claim 24,** Iba et al.'s invention discloses all of the claimed limitations from above, but fails to disclose the image display device according to claim 23, which is an electroluminescent display.

However, Yoshimi et al. teaches the image display device according to claim 23, which is an electroluminescent display (see e.g. paragraph [0013] of the English translation).

21. Given the teachings of Yoshimi et al., it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the polarizer of Iba et al. with an image display device using the polarizer is an electroluminescent display.

Doing so would provide a display that has increased luminance and viewing quality.


**Conclusion**

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following reference is cited for disclosing related limitations of the applicant's claimed and disclosed invention: Nagy et al. (U.S. 4,025,688).


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jessica M. Merlin whose telephone number is 571-270-3207. The examiner can normally be reached on Monday-Friday 7:30AM-5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Nelms can be reached on 571-272-1787. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



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October 14, 2007



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